AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) Radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder comprising at least one of radiation-chemically ~~and/or~~ and plasma-chemically modified ~~PTFE powders~~ polytetrafluoroethylene powder including a surface, ~~on the particle surfaces of which~~ and homopolymers, copolymers or terpolymers ~~are~~ radically coupled on the surface via a reaction in dispersion or in substance.

2. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 1, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified.

3. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 1, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 50 kGy.

4. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 3, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 100 kGy.

5. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 1, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified in ~~the~~ presence of reactants.

6. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 5, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified under ~~the~~ influence of oxygen.

7. (Currently Amended) ~~Radically~~ The radically coupled ~~PTFE~~ polytetrafluoroethylene polymer ~~powders~~ powder according to claim 1, ~~in which~~ wherein styrene, acrylonitrile, maleic anhydride, acrylic acid, (meth-) methyl acrylate, vinyl acetate, glycidyl methacrylate, (meth-) acrylamide compounds or mixtures thereof are added as polymerizable, olefinically unsaturated monomers.

8. (Currently Amended) Method for producing ~~PTFE~~ a radically coupled polytetrafluoroethylene polymer ~~powders~~ powder ~~according to one of claims 1 through 7, in which PTFE powders~~ comprising at least one of radiation-chemically and plasma-chemically modified polytetrafluoroethylene powder including a surface, and homopolymers, copolymers or terpolymers radically coupled on the surface via a reaction in dispersion or in substance, comprising reactively converting polytetrafluoroethylene powder that is at least one of radiation-chemical and plasma-chemical modified and has ~~with~~ reactive perfluoroalkyl-(peroxy) radical ~~centers are reactively converted after a radiation-chemical and/or plasma-chemical modification~~ centers, in dispersion or substance with ~~the~~ addition of polymerizable, olefinically unsaturated monomers, ~~whereby during the reaction~~ so that a polymer-forming reaction to homopolymers, copolymers or terpolymers on the ~~PTFE~~ polytetrafluoroethylene powder is ~~realized~~ obtained.

9. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the ~~PTFE powders~~ polytetrafluoroethylene powder with reactive perfluoroalkyl-(peroxy) radical centers after [[a]] at least one of radiation-chemical ~~and/or~~ and plasma-chemical modification ~~are~~ is subjected to a tempering at low temperatures yielding the reactive perfluoroalkyl-(peroxy) radical centers.

10. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the polytetrafluoroethylene powder comprises radiation-chemically modified ~~PTFE~~ polytetrafluoroethylene powder ~~is used~~.

11. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 50 kGy.

12. (Currently Amended) ~~Method~~ The method according to claim [[12]] 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified with a radiation dose greater than 100 kGy.

13. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified in ~~the~~ presence of reactants.

14. (Currently Amended) ~~Method~~ The method according to claim [[14]] 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is radiation-chemically modified under ~~the~~ influence of oxygen.

15. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene powder is ~~used as~~ a micropowder.

16. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the reaction is ~~realized~~ performed in an autoclave or in a stirred tank or in an extruder/kneader.

17. (Currently Amended) ~~Method~~ The method according to claim 8 ~~in which~~ wherein olefinically unsaturated monomers comprise at least one of styrene, acrylonitrile, maleic anhydride, acrylic acid, (meth-)methyl acrylate, vinyl acetate, glycidyl methacrylate and (meth-)acrylamide compounds ~~compound(s) are added as olefinically unsaturated monomers~~.

18. (Currently Amended) ~~Method~~ The method according to claim 8 ~~in which~~ wherein the olefinically unsaturated monomers comprise a mixture of monomers ~~is used~~.

19. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the olefinically unsaturated monomers comprise at least one of macromeres ~~and/or~~ and oligomers ~~are used as polymerizable, olefinically unsaturated monomers~~.

20. (Currently Amended) ~~Method~~ The method according to claim 8, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene polymer ~~powders are provided with~~ powder includes functional groups which in subsequent reactions are reacted with other low-molecular, oligomeric and/or polymeric substances.

21. (Currently Amended) ~~Method~~ The method according to claim 19, ~~in which~~ further comprising incorporating the ~~PTFE~~ polytetrafluoroethylene polymer ~~powders are incorporated via compounding~~ powder in plastics/polymers.

22. (Currently Amended) ~~Method~~ The method according to claim 20, ~~in which~~ wherein the ~~PTFE~~ polytetrafluoroethylene polymer ~~powders are~~ powder is incorporated into at least one of elastomers, ~~and/or~~ thermoplastics ~~and/or~~ and thermosets ~~(and/or mixtures thereof)~~.